STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: **RASHFORD RIDGE** *Agreement #:* **30-083025**

2. Name of applicant: **Washington State Department of Natural Resources**

3. Address and phone number of applicant and contact person:
   Pacific Cascade Region
   601 Bond Road
   PO box 280
   Castle Rock, Washington 98611-0280
   Phone: (360) 577-2025
   Contact Person: Robert W. Johnson

4. Date checklist prepared: **07/29/2008**

5. Agency requesting checklist: **Washington State Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **December 2008**
   b. *Planned contract end date (but may be extended):* **October 2010**
   c. *Phasing:* **N/A**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. *Site preparation:*
   Some mechanical site preparation will be done during ground-based harvest activities. Chemical spraying via aerial and/or ground methods may be applied after harvest is complete.

   b. *Regeneration Method:*
   Upon completion of harvest activities and any necessary site preparation treatments, the units will be hand planted with a mix of Douglas-fir and western redcedar seedlings to meet or exceed Forest Practices requirements.

   c. *Vegetation Management:*
   Competing vegetation will be monitored periodically. If competing vegetation is adversely affecting tree survival and growth, a manual or chemical release may be prescribed.

d. *Thinning:*
A survey at approximately 12 to 15 years of age will determine if pre-commercial thinning is needed. The stands will be evaluated at approximately 25 to 40 years of age to determine if commercial thinning will be necessary.

Roads: **Road maintenance assessments will be conducted annually and may include periodic ditch and culvert cleanout and road grading as necessary.**

Rock Pits and/or Sale: **The rock pits will be maintained in a safe condition with proper drainage. The rock pit may be used for other projects in the vicinity.**

Other:
Firewood salvage may occur following harvest.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒ *303 (d) – listed water body in WAU:* ☒ *temp* ☐ *sediment* ☐ *completed TMDL (total maximum daily load):*
☐ *Landscape plan:*
☐ *Watershed analysis:*
☐ *Interdisciplinary team (ID Team) report:*
☒ *Road design plan:* **Road Plan Available at Pacific Cascade Region office.**
☒ *Wildlife report:* **Available upon request at the Region office.**
☐ *Geotechnical report:*
☐ *Other specialist report(s):*
☐ *Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒ *Rock pit plan:* **Rock Pit Plan Available at Pacific Cascade Region office.**
☒ *Other:* **Spotted owl mapping, Forest Practices Activity maps, WAU map for rain-on-snow areas, State soil survey, DNR GIS databases, Policy for Sustainable Forestry (PSF, 2006), Habitat Conservation Plan (HCP, January, 1997), HCP Checklist (attached), Planning and Tracking Special Concerns Report and associated maps, Siouxon Road and Abandonment Plan (RMAP #2900971), Weighted Old Growth Habitat Index (WOGHI).**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
No applications are pending.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒ *HPA* ☐ *Burning permit* ☐ *Shoreline permit* ☒ *Incidental take permit* **1168 and PRT-812521** ☒ *FPA#* **2918701**_ ☐ *Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*
This proposed timber harvest activity is located in the Columbia Planning Unit and is within the Columbia Nesting, Roosting, and Foraging (NRF) Management Area. This area is primarily managed for providing habitat for the northern spotted owl (NSO) in the Columbia Planning Unit. The gross acreage of the proposed area is approximately 127 acres. The activity involves the variable retention harvest of 94 net acres of non-habitat within the Siouxon Spotted Owl Management Unit (SOMU). There are approximately 9 acres of Riparian Management Zone (RMZ) and 24 acres of "Leave tree" clumps. The non-habitat area is not contributing to the 50% target threshold of suitable northern spotted owl habitat in the Siouxon SOMU and is not located within a Future Habitat Area (FHA).

The proposal harvest area consists primarily of mature western hemlock, Douglas-fir, bigleaf maple, western redcedar and immature western hemlock. Approximately 70% of the proposed area was harvested for utility poles in 1996. The immature western hemlock component of the stand regenerated a few years after the utility pole harvest in 1996 and is not evenly distributed throughout the stand. The ages of the mature conifer range from 70 to 100 years of age with a few, small, isolated pockets of approximately 180-year-old Douglas-fir.

Sale of Timber

Unit #	Proposed acres	RMZ acres	Gross Sale Acres	Legacy Tree acres	Net Harvest acres
1	127	9	118	24	94

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*
Stand Description:
The proposed harvest area is comprised mainly of homogeneous western hemlock and Douglas-fir. Other minor tree species are western redcedar and bigleaf maple. Two small pockets of older Douglas-fir (approximately 180-years-old) are located in the far southeastern corner of the proposal area and in the middle of the southern boundary, just east of the type 3 RMZ. These older Douglas-fir trees are protected from harvest with "Leave Tree" clumps. The majority of western redcedar, bigleaf maple and snags are also protected from harvest with "Leave Tree" clumps. The understory consists of Oregon grape, salal, sword fern, salmon berry and immature western hemlock (approximately 10 years old). The origin dates of the stand range from approximately 1908 to 1938. The stand proposed for variable retention harvest is classified as non-habitat for the northern spotted owl and currently does not contribute to the 50% target threshold of sub-mature habitat within the Siouxon SOMU.

Overall Unit Objective:
The management strategy for the Siouxon SOMU does not identify these stands as contributing to the 50% habitat threshold in the near future. The objective of this activity is to maintain important habitat characteristics for the creation of future, high quality, northern spotted owl habitat while providing revenue for Trust beneficiaries. This will be achieved through a variable retention harvest, which will reestablish forest stands with structural features (live and dead legacies for future horizontal and vertical diversity), and enhance connectivity in the landscape. The objectives will be achieved by following the guidelines set forth in the PSF, the HCP and Washington State Forest Practices.

Silvicultural Objective:
The primary silvicultural objective for this harvest area is to protect unique features associated with northern spotted owl habitat and establish a new, diverse cohort of healthy and vigorous trees while providing for future vertical and horizontal complexity at the stand and landscape scale.

Wildlife Objective:
The primary wildlife objective of this proposal is to add vertical and horizontal complexity at the stand and landscape scale and to maintain live and dead legacies that provide important habitat features for northern spotted owls in the Siouxon NRF Management Area. Legacies (wildlife trees) have been clumped and scattered at a minimum of 12 trees/acre to protect portions of wildlife habitat within the timber sale boundaries. These leave areas include: wet areas, potentially unstable areas, areas with large snags and legacy Douglas-fir. Snags within the harvest area will only be retained if they meet Washington State Department of Labor and Industries logging safety guidelines. Those snags that must be felled for safety reasons shall remain where they fall. Existing large woody debris (LWD) may not be removed from the sale area and will be disturbed as little as possible.

Type of Harvest:
This sale is a variable retention harvest.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		2,187	3	0
Reconstruction		3,893		0
Abandonment		3,586	0	0
Bridge Install/Replace				
Culvert Install/Replace (fish)				
Culvert Install/Replace (no fish)	1			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:
Sections 34 and 35, Township 6 North, Range 4 East, W.M.

b. *Distance and direction from nearest town (include road names):*
The proposal area lies approximately 11 miles northeast from Amboy, via Highway 503, Ne Healy Rd, USFS 54, forest road S-1000 and S-1200.

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	Subbasin Acres	Subbasin #	Proposal Acres
Siouxon	42,705.3	2317.7	16	103
Canyon Creek/Fly Creek	42438.6	2369.5	1	15

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*
Rashford Ridge timber sale is a variable retention harvest located within sub-basin 16 of the Siouxon WAU and sub-basin 1 of the Canyon Creek/Fly Creek WAU.

Siouxon WAU (#270395):
There has been periodic regeneration timber harvesting and variable density thinning (VDT's) throughout the WAU. Of the 18,541 acres managed by DNR in the WAU, approximately 311 acres (108 even-aged and 203 VDT) have been harvested or sold within the past seven years. The plans of the adjacent landowners in the WAU are unknown. Approximately 43% of the land within the WAU is managed by the DNR. DNR manages less than 50% of the WAU and therefore does not manage for rain on snow (ROS). In sub-basin 16, approximately 83% of the land is under DNR management. Approximately 82% percent of the WAU sub-basin managed by the DNR will be greater than 25-years-old after harvesting.

SIOUXON WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE
DNR MANAGED LAND	18,541	0	278	200	200
PRIVATE OWNERSHIP	788	105	0	Unknown	Unknown
FEDERAL	23,376	0	0	Unknown	Unknown
TOTAL	33,590	105	278	200	200

Canyon Creek/Fly Creek:
Approximately 2% of the land within this WAU is managed by the DNR. In sub-basin 1, approximately 26% of the land is under DNR management. There has been no regeneration timber harvesting and one VDT within the past 7 years within the WAU. The plans of the adjacent landowners in the WAU are unknown. DNR manages less than 50% of the WAU and therefore does not manage for ROS. Approximately 63% percent of the WAU managed by the DNR will be greater than 25-years-old after harvesting.

CANYON CREEK/FLY CREEK WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE
DNR MANAGED LAND	689	0	22	0	0
PRIVATE OR OTHER PUBLIC OWNERSHIP	17,093	1,186	37	Unknown	Unknown
FEDERAL	24,657	0	0	Unknown	Unknown
TOTAL	42,439	1,186	59	0	0

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☒Steep Slopes, ☒Mountainous, ☐Other:

1) *General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*
The Siouxon WAU is situated in the western foothills of the Cascade mountain range and drains into the Lewis River, including segments now inundated by Yale Reservoir and Lake Merwin Reservoir. The WAU covers approximately 43,000 acres, of which about one-third is managed by the State of Washington Department of Natural Resources (DNR). The WAU can be categorized as mountainous, with steep slopes rising out of drainages and upland benches, ridges and peaks. Elevations range from 500 to 4,400 feet. The climate is moist and temperate, with mild, wet winters and warm, dry summers. The deep soils found within the WAU allow for high growth potential and typically recover well following natural disturbances. The lower limit of the rain-on-snow (ROS) zone generally occurs between 1,500 to 2,000 feet and the upper limit between 2,500 to 3,000 feet. Most of the WAU falls within the western hemlock forest zone. At present, the primary forest type is even-aged Douglas-fir/western hemlock forest.

The Canyon Creek/Fly Creek WAU is situated in the western foothills of the Cascade mountain range and drains into the Lewis River, including segments now inundated by Yale Reservoir and Lake Merwin Reservoir. The WAU covers approximately 42,000 acres, of which about 2% is managed by the State of Washington Department of Natural Resources (DNR). The WAU can be categorized as mountainous, with steep slopes rising out of drainages and upland benches, ridges and peaks. Elevations range from 200 feet to 4,400 feet. The climate is moist and temperate, with mild, wet winters and warm, dry summers. The deep soils found within the WAU allow for high growth potential and typically recover well following natural disturbances. The lower limit of the rain-on-snow (ROS) zone generally occurs between 1,500 to 2,000 feet and the upper limit between 2,500 to 3,000 feet. Most of the WAU falls within the western hemlock forest zone. At present, the primary forest type is even-aged Douglas-fir/western hemlock forest.

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*
This proposal is located at approximately 1,400 feet to 1,900 feet in elevation. The timber type is primarily Douglas-fir and western hemlock with components of western redcedar, red alder, and big leaf maple. The conifer in the stand range in age from approximately 70 to 100-years-old with few older conifers (approximately 180 years of age). A majority of the slopes within the sale are less than 35%. This sale area is very similar to other areas in the WAU.

b. What is the steepest slope on the site (approximate percent slope)?
80%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
9615	SANDY LOAM	2-30	78	LOW	MEDIUM
0170	V.GRAVELLY LOAM	5-30	28	LOW	MEDIUM
0171	V.GRAVELLY LOAM	30-65	18	MEDIUM	MEDIUM
0176	ASCHOFF-ROCK OUTCROP-COMPLEX	65-90	2	No Data	No Data

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
Yes.

1) *Surface indications:*
The State Lands landslide Hazard Zonation (LHZ) report for the Siouxon block identified several shallow-rapid landslides. Some indicators of shallow failure include exposed soils and rock in debris slide scars, stream channels scoured by debris flows, and swept and jack-strewed trees. Indicators of deep-seated movement are seen mostly as tensional landforms and features occurring at both small and large scales. Field reconnaissance, State Soil Survey and SMORPH maps, and the GIS Landslide Hazard Zonation data layer were used for identifying potentially unstable landforms.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
All of the units of the proposed sale area are underlain by volcanic lava flows and volcaniclastic rock. The units are interpreted as dominantly stream and lakebeds deposited low on the flanks of a volcano or in distal environments between local volcanoes. These units are extremely competent and can maintain vertical slopes typically devoid of soils. However, several very large (greater than one acre) deep-seated landslides have occurred within the Siouxon area and all are interpreted as natural failures. No deep-seated failures are identified in the LHZ report to have occurred from management related activities.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:
The LHZ report identified a represented sample of 286 landslides ranging from "questionable" to "definite" landslides that were inventoried using aerial photographs obtained between 1969 and 1999. The management related landslides results only in shallow failures. Of the identified landslides within the Siouxon block, 115 failures initiated on forest roads, 39 occurred in harvest units and 14 in stands between five and fifteen years old. Of the non-road related failures, the vast majority occurred within managed Forest Practices rule-identified unstable features (bedrock hollow, inner gorge, convergent headwall, etc.)

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*
The high hazard landforms identified by the LHZ report have been bounded out of the unit.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*
- **Sale boundaries were located away from high failure potential areas whenever possible.**
- **A large (7 acre) leave tree clump is located on the northern boundary to protect the adjacent stand (which is located on steep, unstable slopes) from windthrow and potential slope failures.**
- **Reduce risk along streams that can occur from increased surface run-off and slumping along stream channels could deliver sediment. This includes:**
  - **Yarding away from areas of shallow groundwater, soggy soils, slump headwalls and toes, landslide headwalls and toes, and inner gorges.**
  - **Minimizing the use of ground-based systems on saturated soils and buffering landforms showing recent, localized slope instability.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **3** *Approx. acreage new landings:* **2** *Fill source:* **Native**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
A small amount of incidental erosion could occur during the course of road building, rock pit development activities, and yarding. Prudent road location, appropriate construction techniques and maintenance, as well as the mitigating measures outlined in question B.1.h. below will minimize and control any possible erosion

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*
Less than 1% of the proposal will be in permanent rocked running surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)
- **Soils exposed during road construction will be grass seeded and fertilized.**
- **Seasonal timing restrictions will prohibit road construction during wet weather conditions unless authorized by the Contract Administrator.**
- **Cross-drains will be installed properly and maintained.**
- **Areas of high failure potential were bounded out of proposed units either with "Timber Sale Boundary" tags or with "Leave Tree Area" tags.**
- **Adequate numbers of culverts and ditch outs will discharge ditch water onto the forest floor.**
- **The lead-end of logs will be suspended during all yarding operations.**
- **The potential for sediment delivery will be addressed as needed during operations with the use of water bars or silt traps.**

<u>Protection measures to reduce erosion associated with active logging operation:</u>
- **Ground-based yarding will be restricted to slopes less than 35% and during dry soil conditions only.**
- **Ground yarding restrictions will be prescribed to minimize soil impacts including compaction and rutting.**
- **Cable yarding areas will be required on slopes greater than 35%.**
- **Skid trails will be water barred as necessary to prevent sediment delivery to live water.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
Minor amounts of engine exhaust from logging equipment and dust from vehicle traffic and logging equipment are expected while the project is active.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
Nothing.

3. **Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map available at DNR region office, or forest practice application base maps.)*
Yes.

a) Downstream water bodies:
There is one type 3 stream and two type 4 streams in the immediate vicinity of the site. One type 4 stream drains into the type 3 stream, which drains into Siouxon Creek. Siouxon Creek drains into Yale Lake. The other type 4 stream drains into Canyon Creek. Canyon Creek drains into the Lewis River, which drains into Merwin Lake. Yale Lake drains into Merwin Lake, which drains into the Columbia River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Stream	3	1	172
Stream	4	2	100
Stream	5	2	Buffered with Leave Tree tags

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.
Only one side of the type 3 stream is adjacent to this proposal. The type 3 stream has been buffered by an average RMZ of 172 feet. The type 4 streams are buffered by a minimum RMZ of 100 feet on all sides. The type 5 streams are protected with legacy trees where possible. All streams have been evaluated per the HCP Water Typing System and protected per current HCP guidelines and procedures.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)*
Description (include culverts):
Timber felling, bucking, cable yarding, cable hanging and tracked mobile yarding will take place within 200 feet of all the described waters. However, some leave tree clumps will prevent harvest activities from occurring within or adjacent to portions of streams. Any slash that may enter type 5 streams will be cleaned out per contract requirements. This proposal requires the installation of a 24-inch by 50-foot culvert on the S-1200 road within a type 4 water. Some trees may be felled to facilitate the culvert installation. See riparian addendum attached to the Forest Practices Application.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☐*No* ☒*Yes, describe location:*
The installation of a 24-inch by 50-foot culvert within a type 4 stream will be within the footprint of the 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?
Generally, the high potential areas associated with erosion or mass wasting are located on convergent slopes of 65% or greater and often involve unstable soils and/or steep head walls. Some past failures have entered streams in small amounts. With the mitigating measures to be implemented, this proposal is not expected to contribute material sediment to surface waters. See questions B.1.c, B.1.d, B.1.f, B.1.h, and B.3.9).

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*
See question B.3.a.13 below.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐*No* ☒*Yes, explain:*
This proposal could possibly introduce minor amounts of sediment into the streams adjacent to the proposal area as a result of road building and harvest operations during early stages of activity. The erosion control measures and operation procedures outlined in B.1.f and B.1.h. are expected to minimize the chances of any sediment delivery.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*

WAU	Road Miles/ Square Mile
Siouxon	3.0
Sub-basin 16	4.0
Canyon Creek/Fly Creek	7.0
Sub-basin 1	3.0

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not,* ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*
Normally, there are few significant changes associated with peak flows in the WAU or sub-basins. However, in the winter of 1996, a 100-year event occurred. The rainstorm set rainfall and flood level records in Southwest Washington and Northwest Oregon. The event caused many shallow mass-wasting events. Many stream channels were altered in this event due to extremely high stream flows with accompanying sediment loads and possibly large woody debris delivery. The full extent of this is not known.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*
This proposal may slightly change the timing, duration, and amount of peak flow. Flow rates may increase slightly during low and high flow periods due to decreased transpiration and interception during the first decade of new forest growth. However, no cumulative impacts are expected since similar projects in the WAU have resulted in no noticeable increase in peak flows. See question B.3.a.16 below.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*
See question B.1.h for site-specific protection measures to help control erosion and protect water quality.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
Relief culvert drainage may increase ground water recharge directly below culvert outlets.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site. This proposed activity is expected to have no impact on ground water.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) *Note protection measures, if any.*
No specific protection measures were incorporated into this proposal to protect these resources beyond those described in B.1.h., B.1.5.d, and B.3.a.1.c.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
Surface runoff from the roads will be collected in ditches and discharged through culverts and ditch outs to the forest floor for natural filtration. Sediment ponds and/or silt fences will be used to remove silt from entering ditch water if necessary.

2) Could waste materials enter ground or surface waters? If so, generally describe.
Yes.

a) *Note protection measures, if any.*
Due to the buffers on the streams associated with this proposal, no logging slash from harvest activities will enter any perennial waters. Any logging slash that inadvertently enters streams during the process of road construction or reconstruction will be removed immediately.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other:* **vine maple, Oregon grape**
☐grass
☐pasture
☐crop or grain
☐wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☐*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: **bracken fern, sword fern, vanilla leaf, lady fern, blackberry, deer fern, Oregon oxalis, pacific trillium**
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*
Approximately 4.2 MMBF of Douglas-fir, western hemlock and bigleaf maple will be removed from the site. The age of the timber is approximately 70 to 100-years-old. Some vine maple, huckleberry, salmonberry, Oregon grape and salal will be disturbed during harvest activities on slopes less than 35% to create approximately 350 well-distributed plantable spots per acre.

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*
Rashford Ridge timber sale is bounded to the south and north by timber land of the same age, to the west by timber land that is less than 25 years of age, and to the east by timber land approximately 40 years of age.

Associated RMZs are comprised of Douglas-fir, western hemlock, western redcedar, red alder and bigleaf maple.

2) *Retention tree plan:*
Rashford Ridge timber sale has approximately 24 acres bounded out as leave tree clumps. There are a few scattered leave trees located to the west of the proposed new road. All retained trees will provide wildlife habitat, older forest components, and a seed source to surrounding areas.

Several of the leave tree clumps are larger than 2 acres. These larger leave tree clumps were created to capture unique timber stand components and to protect adjacent stands. Leave tree clumps consist of:
- **Older legacy trees (180-years-old or greater)**
- **Old and new snags**
- **Western redcedar**
- **Species diversity**
- **Wind throw buffer (north portion of timber sale)**
- **Structure suitable for northern spotted owl habitat (western portion of timber sale)**

c. List threatened or endangered *plant* species known to be on or near the site.
None found in database search.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
RMZs will retain current vegetation in an undisturbed state. An average of twelve wildlife and green recruitment legacy trees per acre will remain on site. The site will be replanted with conifer seedlings at a stocking level that meets or exceeds Forest Practices standards.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☒eagle, ☐songbirds, ☐*pigeon,* ☒other: **Pileated wood pecker, owls**
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☒other: **coyote, mountain beaver, porcupine, mountain lion**
fish: ☐bass, ☐salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☒*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
2	72132	SPOTTED OWL: Site:759-SIOUXON CREEK LOWER	THREATENED	ENDANGERED

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*
This proposal is located in the Columbia River Flyway, which is part of the Pacific Flyway. While migrating through Pacific Northwest Forests, many neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Migratory waterfowl also use the Columbia River Flyway; however, the area in which this proposal is contained is not generally the type of area used for resting or feeding by migratory waterfowl. Riparian areas and special habitats are protected through implementation of DNR's Habitat Conservation Plan.

d. Proposed measures to preserve or enhance wildlife, if any:

- **There will be at least 12 leave trees/acre remaining in the proposal area after harvest.**
- **Big game forage will improve as new regeneration and early plant species evolve post harvest that will benefit two Washington Department of Fish and Wildlife priority species - wintering elk and black-tailed deer.**
- **Approximately 9 acres are buffered in RMZs, which will eliminate or minimize sediment introduction.**
- **Riparian areas will be protected, therefore preserving fish and amphibian habitat.**
- **Selected pockets of leave tree clumps and individually marked trees were left in strategic locations, which contain wet areas, type 5 streams, large down woody debris, snags, and various trees having desirable snag recruitment characteristics. Western redcedar and big leaf maple will be preserved where feasible, in order to enhance the tree species diversity on the site.**
- **Any snags to be felled for safety reasons shall remain near where they fall.**
- **All existing down woody debris greater than 36 inches in diameter shall remain on site.**

1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*
Species /Habitat: **bald eagle, northern spotted owl**

Protection Measures:

Documented communal roosts and nesting areas are common within the associated WAUs along Yale Reservoir and the Siouxon River, but all occurrences are situated greater than .5 miles from this proposal.

This proposal is not within .7 miles of the Status 1 Siouxon Creek Lower nest site. Consequently, no timing restrictions are required with this proposal and only designated non-habitat will be harvested with this proposal.

A 7-acre wind buffer leave island will protect the perching trees and there will be no harvesting or yarding within this unique feature.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
There will be minimal health hazards due to operating heavy equipment and the possible minor spillage of fuel and lubricating oils. The risk of forest fire is always present and will be increased for approximately two years following harvesting due to logging slash. Contractual clauses require operators to use established safety standards.

1) Describe special emergency services that might be required.
- **Firefighting by the Department of Natural Resources, possibly supported by local fire districts.**
- **Emergency medical and/or ambulance service for personal injuries.**
- **Responses by the Department of Ecology if a spill were to occur.**

2) Proposed measures to reduce or control environmental health hazards, if any:
- **Compliance with state laws.**
- **Fire equipment will be required on site during fire season.**
- **Operations will cease if relative humidity falls below 30%.**
- **Public access may be restricted during times of high fire danger.**
- **Compliance with state and federal laws pertaining to hazardous waste spill response and clean-up.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
None.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.
Noise from rock drilling/crushing machinery, rock blasting, road building and harvest operations, and log/dump trucks will increase during periods of operation on a short-term basis.

3) Proposed measures to reduce or control noise impacts, if any:
None planned.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*
- **Timber Production.**
- **Mutual use road easements have been granted to other forestland owners for forest management activities in the vicinity.**
- **Rock from rock pits, may be sold to other forestland owners for forest road maintenance.**
- **Formal and informal public recreation along Yale Lake and the Lewis River.**

b. Has the site been used for agriculture? If so, describe.
No.

c. Describe any structures on the site.
None.

d. Will any structures be demolished? If so, what?
No.

e. What is the current zoning classification of the site?
Forest land.

f. What is the current comprehensive plan designation of the site?
Resource land.

g. If applicable, what is the current shoreline master program designation of the site?
Not applicable.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No.

i. Approximately how many people would reside or work in the completed project?
None.

j. Approximately how many people would the completed project displace?
None.

k. Proposed measures to avoid or reduce displacement impacts, if any:
None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This proposal is consistent with current land use designations and zoning regulations. See question A.11.b. above.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
None.

c. Proposed measures to reduce or control housing impacts, if any:
None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☒*No* ☐*Yes, viewing location:*

2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☒*No* ☐*Yes, scenic corridor name:*

3) *How will this proposal affect any views described in 1) or 2) above?*
Does not apply.

c. Proposed measures to reduce or control aesthetic impacts, if any:
None.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
No.

c. What existing off-site sources of light or glare may affect your proposal?
None.

d. Proposed measures to reduce or control light and glare impacts, if any:
None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
Hunting, fishing, mountain biking, off-road vehicle use, hiking, horseback riding, berry and mushroom picking are all informal recreational activities that take place in the vicinity.

b. Would the proposed project displace any existing recreational uses? If so, describe:
Recreational activities may be temporarily interrupted during periods of operation on the site.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
This proposal was screened for potential archaeological sites or artifacts using the P&T special concerns report and during the pre-sales phase, where no concerns were identified.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
In the event that any unknown archaeological resources are encountered, ground disturbing activities would be halted and our Agency's Archaeologist will be contacted to survey the site and develop a Site Protection Plan.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
N/A

1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*
Traffic from this operation will marginally increase noise, dust, and vehicle density, which may temporarily result in a decrease in safety. Contractual clauses require the operator to use existing safety standards. Truck traffic from this individual operation should not increase the need for public road maintenance.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No.

c. How many parking spaces would the completed project have? How many would the project eliminate?
None.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
Some optional new forest roads will be constructed. See question A.11.c.

1) *How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*
This proposal will have very little impact since all of the optional new road construction will be forest management roads that end on state land, and those roads will be abandoned upon completion of their use. All forest management roads to be utilized will be tributary to paved county roads, which already have residential truck traffic.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
The completed project will generate less than one vehicular trip per day on average. Up to 25 vehicular trips per day could occur during peak harvest activities. These trips would occur primarily between the hours of 05:00 to 17:00 on weekdays.

g. Proposed measures to reduce or control transportation impacts, if any:
See question B.14.a.1 above.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
No.

b. Proposed measures to reduce or control direct impacts on public services, if any.
None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
None.

C. **SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Jon Bonn Natural Resource Specialist Date: 9/04/08
Title

Reviewed by: Robert W. Johnson PRODUCT SALES MANAGER Date: 9/22/08
Title

Comments: _____